

IN THE CLAIMS:

Please amend claims 1-3, 5, 7, 9, 12-16, 18 and 21 as indicated below.

Please add claims 22-24 as indicated below.

A listing of the status of all claims 1-24 in the present patent application is provided below.

1 (Currently Amended). A method for tracing source addresses of packets, the method comprising:

receiving a current packet at a network element;

identifying at least part of a source address of a—the current packet;

querying a storage module of the network element to identify at least one source address of a previously received packet;

determining whether the at least part of the source address of the current packet matches at least part of the at least one source address of the previously received packet recorded within ~~a predetermined time period prior to arrival of the packet;~~ and

routing the current packet to a network element if the at least part of the source address of the current packet matches at least part of the at least one source address of the previously received packet ~~recorded within the predetermined~~

~~time period prior to the arrival of the packet.~~

2 (Currently Amended). The method according to claim 1, where the at least one source address of the previously received packet is recorded in a hierarchical data structure, wherein the hierarchical data structure is based at least in part on a plurality of classes of subnet.

3 (Currently Amended). The method according to claim 1, where a Last Time Seen (LTS) value associated with each of the at least one source address of the previously received packet is recorded.

4 (Previously Presented). The method according to claim 1, further comprising:

recording an arrival time of the packet.

5 (Currently Amended). The method according to claim 1, further comprising:

routing the current packet to the network element with a warning if the at least part of the source address of the current packet does not match at least part of the at least one source address of the previously received packet ~~recorded within~~

~~the predetermined time period prior to the arrival of the packet; and~~

recording the at least part of the source address of the current packet and ~~an arrival reception~~ time of the current packet.

6 (Original). The method according to claim 5, where the warning is recorded in a read-only medium.

7 (Currently Amended). The method according to claim 1, further comprising issuing a warning and discarding the current packet if the at least part of the source address of the current packet does not match at least part of the at least one source address of the previously received packet ~~recorded within the predetermined time period prior to the arrival of the packet.~~

8 (Original). The method according to claim 7, where the warning is recorded in a read-only medium.

9 (Currently Amended). The method according to claim 1, where the source address of the current packet is an internet protocol (IP) address.

10 (Cancelled).

11 (Previously Presented). At least one processor readable medium for storing a computer program of instructions configured to be readable by at least one processor for instructing the at least one processor to execute a computer process for performing the method as recited in claim 1.

12 (Currently Amended). A system for tracing source addresses of packets comprising ~~at least one a first network element for receiving a current packet~~, where the ~~at least one first network element~~ comprises:

a processor module that identifies at least part of a source address of ~~a the current packet, queries to identify at least one source address of a previously received packet,~~ determines whether the at least part of the source address of the current packet matches at least part of the at least one source address of the previously received packet ~~recorded within a predetermined time period prior to arrival of the packet~~, and routes the current packet to a second network element if the at least part of the source address of the current packet matches at least part of the at least one source address of the previously received packet ~~recorded within the predetermined~~

~~time period prior to the arrival of the packet; and~~

a storage module that stores the at least one source address of the previously received packet ~~recorded within a predetermined time period prior to arrival of the packet.~~

13 (Currently Amended). The system according to claim 12, where the at least one source address of the previously received packet is recorded in a hierarchical data structure, wherein the hierarchical data structure comprises a plurality of classes of subnet.

14 (Currently Amended). The system according to claim 12, where a Last Time Seen (LTS) value associated with each of the at least one source address of the previously received packet is recorded.

15 (Currently Amended). The system according to claim 12, where the processor module is further adapted to record ~~an arrival~~ reception time of the current packet.

16 (Currently Amended). The system according to claim 12, where the processor module is further adapted to:

route the current packet to the second network element with

a warning if the at least part of the source address of the current packet does not match at least part of the at least one source address of the previously received packet ~~recorded within the predetermined time period prior to the arrival of the packet~~; and

record the at least part of the source address of the current packet and ~~an arrival reception~~ time of the current packet.

17 (Original). The system according to claim 16, where the warning is recorded in a read-only medium.

18 (Currently Amended). The system according to claim 12, where the processor module is further adapted to issue a warning and discard the current packet if the at least part of the source address of the current packet does not match at least part of the at least one source address of the previously received packet ~~recorded within the predetermined time period prior to the arrival of the packet~~.

19 (Original). The system according to claim 18, where the warning is recorded in a read-only medium.

20 (Currently Amended). The system according to claim 12, where the source address of the current packet is an internet protocol (IP) address.

21 (Currently Amended). A system for tracing source addresses of packets, the system comprising:

means for receiving a current packet;

means for identifying at least part of a source address of ~~a~~the current packet; and

means for querying a storage module to identify at least one source address of a previously received packet;

means for determining whether the at least part of the source address of the current packet matches at least part of the at least one source address of the previously received packet ~~recorded within a predetermined time period prior to arrival of the packet~~; and

means for routing the current packet to a network element if the at least part of the source address of the current packet matches at least part of the at least one source address of the previously received packet ~~recorded within the predetermined time period prior to the arrival of the packet~~.

22 (New). The method according to claim 1, wherein the at least

one source address of the previously received packet is recorded within a predetermined time period prior to receiving the current packet.

23 (New). The method according to claim 2, wherein the plurality of classes of subnet comprises at least one of a class A subnet, a class B subnet, and a class C subnet, wherein the class A subnet comprises a first octet of the at least one source address recorded, the class B subnet comprises a second octet of the at least one source address recorded, and the class C subnet comprises a third octet of the at least one source address recorded.

24 (New). The method according to claim 23, wherein determining whether the at least part of the source address of the current packet matches at least part of the at least one source address of the previously received packet comprises comparing the at least part of the source address of the current packet with at least one of the plurality of classes of subnet of the at least one source address of the previously received packet.